

Syllabus

[cmcd.economia@fgv.br]

Course: COMPUTATIONAL METHODS IN EMPIRICAL FINANCE II

Professor:

2015 SECOND SEMESTER

COURSE OUTLINE

The course provides an introduction empirical finance using MATLAB

PROGRAM

Fourth Quarter

1. Simulations Methods
2. Forecasting risk
3. Risk Management
4. Value at Risk and Principal Components
5. Backtesting and Stress Test
6. Extreme Values Theory and Copulas
7. Asset Allocation

BIBLIOGRAPHY

- Danielsson, D. *Financial risk forecasting*, Wiley Finance (D2011)
- Huynh, H. T., Lai, V. S., Soumare, I. (2008) *Stochastic Simulation and Applications in Finance with MATLAB Programs*, Wiley Finance (HLS2008)
- Nyholm, K. (2008) *Strategic Asset Allocation in Fixed Income Markets: A Matlab based user's guide*" (N2008)
- Pachamanova, D., Fabozzi, F. (2010) *Simulation and optimization in Finance: modeling with MATLAB, @Risk, or VBA (PF2010)*
- Tsay, R. S. (2010) *Analysis of Financial Time Series*, 3rd Edition, Wiley (T2010)
- Ghysels, E. (2014) *Matlab Toolbox for Mixed Sampling Frequency Data Analysis using MIDAS Regression Models*

GRADING

50% applied paper and 50% assignments

